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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,299	06/27/2003	Matthew F. Russell	RU01-P11-2	8035
27451	7590	03/29/2004	EXAMINER	
REIDLAW, L.L.C.			SALDANO, LISA M	
1926 SOUTH VALLEYVIEW LANE			ART UNIT	
SPOKANE, WA 99212-0157			PAPER NUMBER	

3673

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<b>Application No.</b> 10/609,299		<b>Applicant(s)</b> RUSSELL ET AL.	
	<b>Examiner</b> Lisa M. Saldano		<b>Art Unit</b> 3673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 20-29 and 36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-27 and 36 is/are rejected.
- 7) ☒ Claim(s) 28 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Objections*

1. Claim 23 is objected to because of the following informalities:

Regarding claim 23, line 1, the claim recites limitations regarding "the wall element..."

However, the prior language from which the claim depends fails to disclose a wall element.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 20, 22, 26, 27 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Ino et al (JP-03013691-A).

Regarding claim 20, Ino et al disclose a construction method for an underground tunnel comprising spiral excavation downward into natural ground, which includes soil, to form an underground ramp (see Fig. 1 and abstract). Ino et al disclose spirally installing concrete floor plates 2 and fixing those spiral concrete floor plates 2 to continuous underground walls 1. First

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portions of the spiral concrete floor plates are used as a ceiling, then a lower portion of natural ground is downwardly and spirally excavated under the first portion of the concrete floor plate to install a second portion of the spiral concrete floor plate. The process yields a structure having an essentially continuous concrete slab with first portions above and spaced apart from second portions (see Figs. 1, 3 and 4).

Regarding claim 22, Ino et al disclose a construction method for an underground tunnel as described above wherein first and second portions of the concrete slab are generally in alignment with each other. Ino et al further disclose continuous underground walls 1 that join the first and second sections of the concrete slab at both the inner and the outer perimeters (see Fig. 4).

Regarding claim 26, Ino et al disclose a construction method for an underground tunnel as described above wherein continuous underground walls 1 are forced to each other under the ground before installing the concrete floor plates that are fixed to the underground walls (see abstract).

Regarding claim 27, Ino et al disclose a construction method for an underground tunnel as described above wherein a third portion of the concrete slab is installed below and spaced apart from first and second portions of the spiral concrete floor plate. The third portion is installed after natural ground is further excavated to extend a downward spirally sloping ramp to a location below the first and second portions.

Regarding claim 36, Ino et al disclose a construction method for an underground tunnel as described above wherein the concrete slab defines a plurality of concrete flights defines by an inner and outer perimeter. Ino et al further disclose underground walls attached to the inner and

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outer perimeters of the concrete slab whereby uppermost portions of the concrete slab form a roof over the concrete slab.

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ino et al, as applied to claim 20 above, in view of Dallimer et al (4973197).

Ino et al disclose a construction method for an underground tunnel comprising spiral excavation downward into natural ground, which includes soil, to form an underground ramp (see Fig. 1 and abstract). Ino et al disclose first and second portions of the concrete slab that are generally in alignment with each other.

Regarding claim 23, Ino et al further disclose continuous underground walls 1 that join the first and second sections of the concrete slab at both the inner and the outer perimeters (see Fig. 4).

However, Ino et al fail to explicitly disclose that a water jetting process is used during soil excavation.

Dallimer et al disclose silos and methods of burying silos wherein soil is removed from a body associated with the silos. Dallimer et al disclose that one means for soil removal may comprise at least one water jet (see column 2, lines 1-12).

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply a water jetting process, as taught by Dallimer et al, to the soil excavation method used by Ino et al because it is water jetting is commonly used during the construction and even maintenance of civil structures. Pressurized water to an efficient and cost effective means of displacing materials, particularly soil.

6. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ino et al as modified by Dallimer et al, as applied to claim 23 above, in further view of Ino et al (JP-03017311-A) referred to from here on as Ino'311.

Ino et al disclose a construction method for an underground tunnel as described above. Ino et al disclose that the underground tunnel construction is for use as a subsurface parking garage. The inner perimeter of the concrete slab defines a closed inner area of the subterranean structure. Dallimer et al disclose the use of water jetting during soil excavation.

However, both Ino et al and Dallimer et al fail to explicitly disclose excavating soil out of the closed inner area.

Ino'311 disclose a continuous underground wall method comprising continuous underground walls 10,20 and a concrete floor slab 30 combined with the internal and external continuous underground walls 10,20. Ino'311 also disclose that the underground structure may be used as an underground parking garage. Ino'311 disclose that bedrock between the continuous

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underground walls 10,20 is excavated to install a continuous concrete floor slab. Ino'311 also illustrate excavating soil or earth material out of a closed inner area defined by the inner perimeter of the concrete slab.

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Ino311's step of excavating soil out of the closed inner area to the construction method for an underground tunnel as described by Ino et al because both inventions are used as parking garages. Excavating the inner area provides for use of the inner area for purposes such as storage, utilities or even underground retail stores. In such cases the excavated inner area would require a top, roof or covering for shelter from the elements.

#### *Allowable Subject Matter*

7. Claims 28 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### *Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Murio (5,832,680), Murio (5,775,043), Tokuhiro et al (5,046,910) and Kashima et al (JP-04049324-A) disclose features that are pertinent to the present application.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa M. Saldano whose telephone number is 703-605-1167. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather C. Shackelford can be reached on 703-308-2978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

lms

  
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